



Curriculum Vitae

Prof. Dr. Abdel-Aziz Belal

Personal data:

Name: Abdel-Aziz Belal Abdelmontalbe Belal

Job: Professor of Soil Sciences and Precision Farming

Head of Agriculture Application, Soil and Marine Division, National
Authority for remote sensing and Space Sciences (NARSS)

Gander: Male

Marital Status: Married

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Date of Birth: 02.01.1972, Kafr Elshiekh, Egypt

Education: April, 2002- July 2006 Ph.D. in Precision Farming technology from
Freiburg University, Germany under titled: *Precision farming in
small farmland in Eastern Nile Delta, Egypt using remote sensing
and GIS.*

Oct.1997- May 2001 M.Sc. in Soil Pedology and remote sensing
from Cairo University, Egypt under titled: *Monitoring and
Evaluation of Soil Productivity of Some Areas in North Nile Delta,
Egypt.*

Oct. 1990 – Jun.1994 B.Sc. in Soil Sciences from Faculty of
Agriculture, Tanta University, Egypt.





Postdoc study:

- i. 03/2007 – 06/2007: Postdoctoral student, Zhejiang University, China.
- ii. 07/2008 – 09/2008: Postdoctoral student, Copenhagen University, Denmark.
- iii. 011/2009 – 01/2010: Postdoctoral student, Stuttgart University, Germany.

Positions:

1. **01/2017-Present:** Head of Agriculture Application, Soil and Marine Division, National Authority of Remote Sensing and Space Sciences (NARSS), Cairo, Egypt.
2. **12/2007-01/2017:** Head of Soil Department, National Authority of Remote Sensing and Space Sciences (NARSS), Cairo, Egypt.
3. **01/2014-05/2014:** Head of Agriculture Application, Soil and Marine Division, National Authority of Remote Sensing and Space Sciences (NARSS), Cairo, Egypt.
4. **08/2017- present:** Professor of Soils Sciences and Precision Farming, National Authority of Remote Sensing and Space Sciences (NARSS), Cairo, Egypt.
5. **02/2012- 08/2017:** Associate Professor of Soils Sciences and Precision Farming, National Authority of Remote Sensing and Space Sciences (NARSS), Cairo, Egypt.
6. **07/2006 – 02/2012:** Researcher of Soils Sciences and Precision Farming, National Authority for Remote Sensing and Space Sciences, Cairo, Egypt.
7. **05/2001 – 07/2006:** Assistant research of Soils Sciences, National Authority for Remote Sensing and Space Sciences, Cairo, Egypt.
8. **011/1995 – 05/2001:** Research assistant of Soil Sciences, National Authority for Remote Sensing and Space Sciences, Cairo, Egypt.





Membership:

National Memberships:

- Member: Egyptian Soil Science Society (ESSS), Egypt
Member: Egyptian Remote Sensing and Space Sciences Society, Egypt
Member: Society for Developing Clean Farming System, Egypt
Member: Scientific Society for Environmental protection, Egypt
Member: Union of Egyptian Agricultural, Egypt

International Memberships:

- Member: International Society of Precision Agriculture (ISPA), USA
Member: Indian Society of Agricultural Engineers (ISAE), Indian
Country representative: International Society of Precision Agriculture (ISPA),
USA

Reviewer Journals:

1. Arabian Journal of Geosciences
2. Arid Land Research and Management
3. Journal of Agricultural Research, Monofiy University, Egypt
4. Catena Journal
5. Journal of the Indian Society of Remote Sensing
6. Journal of Earth Science Research
7. Environmental Earth Sciences
8. Egyptian Journal of Remote sensing and Space Sciences
9. Egyptian Journal of Soil Sciences
10. Menoufia Journal of Soil Sciences
- 11.





Chief Editor for the Journal:

- International Journal of Agriculture Sciences (IJAS), Noble Sciences Publisher

Editor for the Journal:

1. Egyptian Journal of Soil Sciences
2. Asian Journal of Agriculture Research
3. Merit Research Journal of Agricultural Science and Soil Sciences (MRJASSS)
4. Journal of Geological Resource and Engineering, David Publishing Company
5. Egyptian Journal of Remote Sensing and Space Sciences
6. Environment, Biodiversity and Soil Security

Awards & Prize:

1. 2002 Fellowships for Ph.D. study in Freiburg, University, Freiburg Germany
2. 2007 Postdoctoral study in Zhejiang University, China
3. 2008 Postdoctoral study in Copenhagen University, Denmark
4. 2009- 2010 Postdoctoral student, Stuttgart University, Germany
5. Prize for the best paper titled: Impact of Urban Sprawl on Agricultural Potentiality in Egypt, International Soils day conference, Zigzag University, Egypt : 16/12/2015

Field of Interest and Main Research Topics:

Precision Agriculture or Smart Agriculture, Sustainable Agriculture, Land and crop Management, Soil Degradation and Desertification, Monitoring of Agriculture Crop, Production ,Soil mapping, Climate change, Yield prediction, Soil survey, land evaluation, Modeling Land and water resources ,Building Soil Information Systems, Water use Efficiency and Environmental hazards monitoring and control.





Professional skills:

1. GIS software (ESRI ArcGIS / Arc Info)
2. Image analyses (ERDAS Imagine, eCognition, ILWIS & ENVI)
3. Office applications (MS Office)
4. Statistical Software (SPSS & Minitab)
5. Database Design
6. MS Project professional

Publications:

1. Belal, A.A., S. Abdel Rahman, F. Hanna, Sh. Sadek, (2002): Impact of Soil Degradation on Land Productivity of Some Areas in the North Nile Delt. International Conference for Environmental Problems Mediterranean Region (EPMR), Turkey 12-15 April 2002.
2. Belal A.A., B. Koch, R. Doluschitz and R. Siwe (2006): Using Crop Growth Models and Remote Sensing to Delineate Management Zones on Small Cotton Farms in Egypt. 8th International Conference on Precision Agriculture and Other Precision Resources Management, July 23-26 in Minneapolis, Minnesota, USA.
3. Belal A.A., B. Koch, R. Doluschitz and R. Siwe (2006): Change Detection in the Eastern Nile Delta Egypt Based on Object-Based Classification. 6 th AARSE international Conference on Earth Observation & Geoinformation Sciences in Support of Africa's Development, 30 October – 2 November, 2006.
4. Huang, J. and Belal, A.A., (2007). Comparing Spectral Angle Mapper and Object Based Approach for Land Use Classification from Multispectral Imagery. International Symposium on Intelligent Information Technology in Agriculture (ISIITA) is held at Beijing Friendship Hotel from Oct.26 to 29, Beijing, China.
5. Abdel Kawy, W.A.M. and Belal, A.A., (2009): Impact of Soil Degradation on Land Qualities of Some Cultivated Areas at East Nile Delta –Egypt. Australian Journal of Basic and Applied Sciences, 3(3): 2054-2063, ISSN 1991-8178.
6. Aboelghar, M., S. Arafat, A. Saleh, S. Naeem, M. Shirbeny, A.A. Belal, (2010): Retrieving leaf area index from SPOT4 satellite data, Egypt. J. Remote Sensing Space Sci., Volume 13, Issue 2, Pages 121-127.





7. Al-Ashri, K. M.A. and A A., Belal, (2010): Relationship between landforms and soil characteristics in Bahariya Oasis, Egypt. J. Soil Sci. and Agric. Eng., Mansoura Univ., Vol.1 (12):1157-11756.
8. Belal, A.A., and Al-Ashri, K. M.A. (2011): GIS based land evaluation in Bahariya Oasis, Western Desert, Egypt. J. Soil Sci. and Agric. Eng., Mansoura Univ., Vol. 2 (1): 11 - 24, 2011.
9. Belal, A.A., (2011): Impact of soil and water resources on land reclamation in western side of Qena Governorate using remote sensing and GIS. International congress water 2011. Katholieke Universiteit Leuven (University of Leuven) Belgium.
10. Abdel Kawy, W.A.M. and A.A., Belal, (2011): Soil resilience mapping in selective wetlands, West Suez Canal, Egypt. The Egyptian Journal of Remote Sensing and Space Sciences, Volume 14, Issue 2, Pages 99-112.
11. Abdel Kawy, W.A.M. and A.A., Belal, (2011): GIS to Assess the Environmental Sensitivity for Desertification in Soil Adjacent to El-Manzala Lake, East of Nile Delta, Egypt. American-Eurasian J. Agric. & Environ. Sci., 10 (5): 844-856, 2011, ISSN 1818-6769. © IDOSI Publications, 2011.
12. Belal, A.A., and F.S. Moghanm (2011): Detecting urban growth using remote sensing and GIS techniques in Al Gharbiya governorate, Egypt. Egypt. J. Remote Sensing Space Sci., Volume 14, Issue 2, Pages 73-79.
13. Elbeih, S.F., A.A., Belal, E.A. Zaghoul, (2011): Hazards mitigation and natural resources evaluation around Sohag – Safaga highway, Eastern Desert, Egypt. The Egyptian Journal of Remote Sensing and Space Sciences, Volume 14, Issue 1, Pages 15-28.
14. Abdel Aal, T.A., and A.A., Belal, (2011): Monitoring land cover changes of the north-western area at El-Fayoum depression and its soil suitability for agricultural purposes. Fayoum J. Agric. Res. & Dev., Vol.25, No.1.
15. Belal, A.A., (2011): Impact of soil and water resources on land reclamation in western side of Qena Governorate using remote sensing and GIS. International congress water 2011. Katholieke Universiteit Leuven (University of Leuven) Belgium.
16. Abdel Kawy W.A, A.A., Belal, and Kh. M. Darwish, (2012): Crop water requirements in selective wetland areas, West Suez Canal, Egypt. Journal of Agricultural Extension and Rural Development (JAERD). Vol. 4(1), pp. 011-018, Available online [http:// academicjournals.org/JAERD](http://academicjournals.org/JAERD). DOI: 10.5897/JAERD11.086 ISSN- 2141 -2154 ©2012 Academic Journals





17. Mohamed E.S., Belal A., and Saleh A. (2012). Desertification Assessment in North Sinai Using Remote Sensing and GIS. International Conference on Environmental Science and Technology 2012: June 25-29, .American Academy of Sciences. Texas, USA.
18. Saleh, A. M., Belal, A.A., El Baroudy, A.A. & Mohamed, E. S. (2012). Assessing soil electrical conductivity for site-specific management with electromagnetic induction and response surface sampling design: a case study of East Nile Delta, Egypt. Joint SSA and NZSSS Soil Science Conference. 2-7 December 2012, Hobart, Australian.
19. Belal, A. A, Mohamed, S. S. and Sharkwy, M. (2012). Spatial- Multi-Criteria Evaluation Approach for Land Evaluation: a Case Study Wadi El-Assyouty –Egypt. 10th International Conference of Egyptian Soil Science Society (ESSS) and 4th International Conference “On-Farm Irrigation and Agroclimatology” 5-8 November 2012, America, Alexandria, Egypt.
20. Abdel Kawy, W.A.M. and A.A., Belal, (2012): Spatial analysis techniques to survey the heavy metals content of the cultivated land in El-Fayoum depression, Egypt. Arabian Journal of Geo-sciences, November 2012, Volume 5, Issue 6, pp 1247–1258.
21. Abdel Kawy, W.A.M. and A.A., Belal, (2013): Use of satellite data and GIS for soil mapping and monitoring soil productivity of the cultivated land in El-Fayoum depression, Egypt. Arabian Journal of Geo-sciences, March 2013, Volume 6, Issue 3, pp 723–732.
22. Saleh, A.M., A. B. Belal and S. M. Arafat, (2013): Identification and mapping of some soil types using field spectrometry and spectral mixture analyses: a case study of North Sinai, Egypt. Arabian Journal of Geo-sciences, June 2013, Volume 6, Issue 6, pp 1799–1806.
23. Mohamed .E.S., Belal, A. A., and Saleh, A. M., (2013): Assessment of Land Degradation East of the Nile Delta, Egypt, Using Remote Sensing and Gis Techniques. Arabian Journal of Geosciences, August 2013, Volume 6, Issue 8, pp 2843–2853.
24. Mohamed E.S., Schutt B., ,Belal A.A.(2013). Assessment of Soil Erosion Hazard in the Northern West Coast -Egypt Using RS and GIS"12th International UFZ-AquaConSoil Conference 16–19 April 2013 Barcelona, Spain.
25. Badawy W. M., Eissa H. S., Belal A. A. and Mohamed E. S. (2013). Estimation Of Some Radiological Parameters Due To Gamma Radioactivity





- In Soil Samples From Some Southern Governorates – Egypt. Journal of Nuclear Research and Development, No5. , pages 37-44.
26. Mohamed E.S., Schutt B., Belal A.A. (2013). Assessment of environmental hazards in the north western coast -Egypt using RS and GIS. The Egyptian Journal of Remote Sensing and Space Sciences. 16, 219–229.
27. Belal A.A., Moghanm F.S, S.F. Elbeih (2013). Evaluation of Some Agriculture Expansion Areas in the Eastern Desert, Egypt using GIS. Int'l Journal of Arts & Sciences (IJAS) Conference which will be held at Hotel Ibis München City Nord, Ungererstrasse 139, 80805 Munich, Germany (23-26 June 2013).
28. Belal, A.A., H. R., El-Ramady, E.S. Mohamed and A. M. Saleh, (2014): Drought risk assessment using remote sensing and GIS techniques. Arabian Journal of Geosciences, January 2014, Volume 7, Issue 1, pp 35–53.
29. Saleh, A., and Belal, A.A., (2014). Delineation of site-specific management zones by fuzzy clustering of soil and topographic attributes: A case study of East Nile Delta, Egypt. IOP Conf. Series: Earth and Environmental Science 18 (2014) 012046 doi:10.1088/1755-1315/18/1/012046.
30. Belal, A.A., Mohamed E.S., Shalaby A. (2014). Using Remote Sensing and Spatial Modeling Approaches for Land Evaluation in Dry Wadis, Eastern Desert, Egypt. 20th WORLD CONGRESS OF SOIL SCIENCE, 2014.6, 214-214.
31. Mohamed, E.S., Belal, A.A., Saleh .A., (2014). Multi criteria analysis for sustainable land use management in some areas in Egypt. The seventh International Conference on Environmental Science and Technology. June 9-13, 2014. Houston .Texas. USA.
32. Mohamed, E.S., Belal, A.A., (2014). Impact of Urban Sprawl of potential Agricultural in Egypt Using Remote Sensing and GIS Techniques. International Soil Day in Zagazig University, Egypt.
33. Mohamed, E.s., Mohamed Abu-hashim, and Abd-ElAziz Belal (2015). Identification of Potential Soil Water Retention Using Hydric Numerical Model at Arid Regions by Land-use Changes. International Soil and Water Conservation Research. Volume 3, Issue 4, Pages 305–315.
34. Mohamed E.S., Belal, A.A. and Shalaby A (2015). Impacts Of Soil Sealing On Potential Agriculture In Egypt Using Remote Sensing And Gis Techniques . Eurasian Soil Sciences, October 2015, Volume 48, Issue 10, pp 1159–1169.





35. Belal, A.A., Mohamed Elsayed and Mohamed Abu-hashim (2015). Land Evaluation Based on GIS-Spatial Multi-Criteria Evaluation (SMCE) for Agricultural Development in Dry Wadi, Eastern Desert, Egypt. *International Journal of Soil Science* 10 (3): 100-116.
36. Saleh, A.M., Belal, A.A., Mohamed, E.s., (2015). Land resources assessment of El-Galaba basin, South Egypt for the potentiality of agriculture expansion using remote sensing and GIS techniques. *The Egyptian Journal of Remote Sensing and Space Sciences*. Vol.18, Issue 1, Pages S19–S30.
37. Mohamed Abu-hashim, Mohamed Elsayed and Abd-ElAziz Belal (2016). Effect of land-use changes and site variables on surface soil organic carbon pool at Mediterranean Region. *Journal of African Earth Sciences*, 114, pp78-84.
38. Saleh, A.M., Belal, A.B. and E. S. Mohamed, (2017). Mapping of Soil salinity Using Electromagnetic Induction: A Case Study of East Nile Delta, Egypt. *Egypt. J. Soil Sci.*, Vol. 57, No.2, pp. 167 - 174.
39. Saleh, A.M., Fadel, M.E., Belal, A.A. (2016). GIS- Based Land suitability in West of Dkhla Oasis, Western desert of Egypt. 1st, Conference: International Conference on Advances in Soil Sciences (ICASS). Alexandria Library, Alexandria, Egypt, 2-5 May.
40. AbdelRahman , M.E.A, Shalaby,A., Belal, A.A., (2017). A GIS Based Model for Land Evaluation Mapping: A Case Study North Delta Egypt. *Egypt. J. Soil Sci.* Vol. 57 No. 3, pp.339 - 351.
41. Awes R.S.M., Belal A.B.A., Hassan, M.A.A., and Abd El-Azeem, S.A.M. (2017): Capability of Field Spectroscopy for the Assessment of Soil Contamination in Southern Port-Said Governorate . *Zagazig J. Agric. Res.*, Vol. 44 No. (4).
42. Saleh, A., Belal, A.A., Jalhoum, M. (2018): Quantitative Assessment of Environmental Sensitivity to Desertification in Sidi Abdel-Rahman area, Northern West Coast of Egypt. *Egypt. J. Soil Sci.* Vol. 58, No. 1, pp. 13 - 26.
43. Mohamed, E.S., Ahmed Saleh, Abdelaziz Belal, Abd-Alla Gad (2018). Application of near-infrared reflectance for quantitative assessment of soil properties. *The Egyptian Journal of Remote Sensing and Space Sciences*. Volume 21, Issue 1, April 2018, Pages 1-14.
44. Moghanm, F.S., and Belal, A.A., (2018): Assessment and mapping of environmentally sensitive areas to desertification using new techniques in



- the North Delta region of Egypt. Egypt. J. Soil Sci. Vol. 58, No. 3, pp. 325-335.
45. Elagouz; M. H., Abou-Shleel, S. M., Belal, A. A. and El-Mohandes, M. A. O. (2018): Using of Remote Sensing to Monitor Changes of Nile Delta Coastal Zone. 1 st International Scientific Conference “Agriculture and Futuristic Challenges” Faculty of Agriculture-Cairo, Al-Azhar University, Nasr City, Cairo, Egypt April 10th – 12th, 2018, Vol. 1(II), pp:563-573.
46. Elagouz; M. H., Abou-Shleel, S. M., Belal, A. A. and El-Mohandes, M. A. O. (2019): Detection of Land Use/ Cover Change in Egyptian Nile Delta Using Remote Sensing. The Egyptian Journal of Remote Sensing and Space Sciences (in press). <https://doi.org/10.1016/j.ejrs.2018.10.004>.
47. Hassan, A. M., Belal, A. A., Hassan, M. A., Farag, F. M., and Mohamed, E. S. (2019). Potential of thermal remote sensing techniques in monitoring waterlogged area based on surface soil moisture retrieval. Journal of African Earth Sciences, 155, 64-74.
48. Hendawy, E., Belal, A. A., Mohamed, E. S., Elfadaly, A., Murgante, B., Aldosari, A. A., and Lasaponara, R. (2019). The prediction and assessment of the impacts of soil sealing on agricultural land in the North Nile Delta (Egypt) using satellite data and GIS modeling. Sustainability, 11(17), 4662.
49. Mohamed, E. S., Belal, A. A., & Abu-hashim, M. (2019). Quantitative assessment of surface runoff at arid region: a case study in the Middle of Nile Delta. Bulletin of the National Research Centre, 43(1), 186.
50. Elsayed Said Mohamed, A. A El Baroudy , T. El-beshbeshy , M. Emam , A. A. Belal, Abdelaziz Elfadaly, Ali A. Aldosari, Abdelraouf. M. Ali and Rosa Lasaponara (2020). Vis-NIR Spectroscopy and Satellite Landsat-8 OLI Data to Map Soil Nutrients in Arid Conditions: A Case Study of the Northwest Coast of Egypt. Remote Sensing, 12, 3716; doi:10.3390/rs12223716.
51. Abou-Shleel, S. M., M. E. Jalhoum , and A. Belal (2020). Agro-ecological zones delineation based for agricultural development in Sinai Peninsula using geo-informatics techniques. Al-Azhar Journal of Agricultural Research V. (45) No. (1) June (2020) 23-37.





52. Amira, M.S., Abu Agwa, F.E., Abu Hussien, E.A., Belal, A.A. and Soliman, A.M., (2020). A recent geomorphic and pedological studies on Menouf Province soil, Moenoufia Governorate, Egypt. *Menoufia J. Soil Sci.*, Vol. 5.
53. Shokr, M.S., Abdellatif, M.A., El Baroudy, A.A., Elnashar, A., Ali, E.F., Belal, A.A., Attia, W., Ahmed, M., Aldosari, A.A., Szantoi, Z., Jalhoum M.E., and Kheir, Ahmed, M. S. (2021). Development of a Spatial Model for Soil Quality Assessment under Arid and Semi-Arid Conditions. *Sustainability* 2021, 13, 2893. <https://doi.org/10.3390/su13052893>.

BOOK and Book chapter & PUBLISHED

A- Books

1. El-Ramday H.R., Abdalla, N., Shalaby, T., and Belal, A., (2010). Glossary of Agricultural and Environmental Sciences Terms. Volume 3, Year 2010, ISBN: 978-3-634-25885-1
2. El-Ramady, H. R., Belal, A., S. M. El-Marsafawy, S. A. Shehata, S. Z. A. Yehia, and E. - S. B. Belal, (2012). Contemporary Environmental Readings Volume 1 Climate Change A Blessing or a Curse for Agriculture. Germany, LAP Lambert Academic Publishing , 2012.
3. El-Ramady, H., Alshaal, T., Bakr, N., Elbana, T., Mohamed, E., Belal, A.A., (2019). The Soil of Egypt. Springer International Publishing.

B-Book Chapters

1. Mohamed Abu-hashim, Mohamed Elsayed and Abd-ElAziz Belal (2017). Land use change and site variables on the soil carbon pool: the potential application in MENA region. *Advance in Environmental Research*, Volume 55, Editor Justin A. Daniela, Nova Publisher, New York.
2. Mohamed E.S., Abu-Hashim M., Belal A.A. (2018). Sustainable Indicators in Arid Region: Case Study – Egypt. In: *The Handbook of Environmental Chemistry*. Springer, Berlin, Heidelberg.





3. Belal, A.A., Mohamed, E.S., Saleh, A. and Jalhoum, M. (2019). Soil Geography. The Soil Map of Egypt. Springer International Publishing.
4. Mohamed, E.S., Belal, A.A., Ali, R.R, Saleh, A. and Hendawy, E.A., (2019). Land Degradation. The Soil Map of Egypt. Springer International Publishing.
5. Abdelaziz B. Belal, Elsayed S. Mohamed, Mostafa A. Abdellatif and Mohamed A. E. Abdelrahman (2021). Soil Conditions of Dakhla Oasis, Western Desert, Egypt. In the book “Sustainable Water Solutions in the Western Desert, Egypt”. Springer, Berlin, Heidelberg.
6. Belal, A.A., EL-Ramady, H.R., Mohamed, E.S., Saleh, A. and Gad, A. (2021). Precision Farming Technologies to Increase Soil and Crop Productivity. In The Book Agro-Environmental Sustainability in MENA Regions. Springer, Berlin, Heidelberg (In press).

Projects Management:

International projects (PI):

1. Water Use efficiency in farm land using remote sensing and GIS. Joint Research Project between NARSS (National Authority for Remote Sensing and Space Sciences), Egypt and Cordoba University, Spain. From 2012 to 2013.
2. Egyptian coordinator for EU project under titled: Improving the local governance processes through exchange of good practices, pilots and training in geospatial technologies (LOCAL-SATS). “Financed under the Second Call for Proposals for Standard Projects of the ENPI CBC Mediterranean Sea Basin Programme”. The Project Reference Number: II-B/4.3/0599 (1/1/2014 -30/12/2015).

International projects staff member

1. Study on Validation of Crop Leaf Area Inversion Using Multi-Source Remote Sensing Data, NARSS and IRS (China Academic of Sciences) from 2007 until 2009.
2. Electronic organization of agricultural schools with geoinformation technologies for the promotion of convergent strategies in the management of rural regions, water resources and environment in South-Eastern





Mediterranean (GI@MED). Joint Research Project, NARSS (National Authority for Remote Sensing and Space Sciences) and CIHEAM (Mediterranean Agronomic Institute of Chania, Greece). (2009 – 2011).

3. Improved Water Resources Management and Capacity Building Program Funded by World Bank (2012-2016).
4. Land Degradation Neutrality Target Setting Programme (LDN). Funded by Global Mechanism of the UNCCD (2017 -2018).

National Projects (PI):

1. Evaluation of soil and surface and groundwater in agriculture expansions in Qena Governorate, Upper Egypt using remote sensing and GIS (from 2009 to 2010), funded by NARSS.
2. Using On-The-Go Sensors Advances in Spatial Sampling and Prediction to Characterize Soil and Wheat Crop Variability for Precision Farming (from 2010 to 2015) , funded by Ministry of Scientific Research and Technology, Egypt.
3. Detecting salinity hazard in El-Tina plain North West Sinai Peninsula using remote sensing and GIS techniques, (2012 – 2013). Fund by NARSS.
4. Sustainable Agriculture Development Based on Agro-ecological Zones in Halayeb and Shalateen Area (2014-2016). Funded by NARSS.
5. Multivariate and Geostatistical Analysis for Soil Quality Assessment in Northwestern Coast of Egypt (2016-2017). Funded by NARSS.
6. Potentiality of land and water resources in new reclaimed land in El-Moghra area for Agricultural development (2017-2018). Funded by NARSS.
7. Building information systems for Land Use and Land Cover in Kafr Elshiekh Governorate, Egypt using remote sensing and GIS (2017-2019). Funded by NARSS by Kafr Elshiekh Governorate, Egypt.
8. Geo-spatial Land Information System Based for Agriculture Development in some areas West of Matrouh (2018 – 2019). Funded by NARSS.
9. Smart Agriculture Systems in small Scale Farm Based on Internet of things (IoT), Information and Communication technology (ICT), (2019-2021) funded by NARSS.





National Projects (CO-PI):

1. Integration Development of Halayib-Shalatien Region Using Remote Sensing and GIS Technology, ASRT-NARSS, (Principle Investigator, Prof. Dr. M. A. Yehia), 1998-1999.
2. Studies of Coastal Changes of Gamsa-Baltiem Area Using Remote Sensing Techniques (Principle Investigator, Prof. Dr. A. Yehia) 1998.
3. Soil Map of Halayib and Shalatain Area Using Remote Sensing Techniques, NARSS, 1998.
4. Mangrove Forest Habitat Assessment in Egypt, NARSS-Ministry of Agriculture; 1999.
5. Evaluation of Land Resources of Darb El Arbain, Kharga Oasis, NARSS-Ministry of Agriculture, 1999-2000.
6. Land Use Map of Siwa Oasis (1:25.000) NARSS-Italian Cooperation Program, 1998.
7. Assessment and Evaluation of Natural Resources of Waid El Natron Burg El Arab-Eldabaa Area, NARSS 2000- 2002.
8. Soil Mapping of Tushka Project, GARPAD-MPWR-NARSS, 1999.
9. Soil and Capability Maps of Tushka Project, GARPAD-MPWR-NARSS, 199-2000.
10. Digital Soil Map of Egypt, Scale 1:1000,000, FAO-NARSS, 2000-2001.
11. Digital Soil Map of Egypt, Scale 1:1000, 000, European Commission, 2000-2001. Project financed by NARSS.
12. Digital Soil Map of Egypt Scale 1: 25,000, By Using Remote Sensing and Geographic Information System Techniques, NARSS, 2001.
13. Development of an integrated system for evaluation of the cultivated arable land of Egypt. Project financed by NARSS 2007.
14. Producing soil and land capability maps of Wadi Qena using remote sensing techniques Sept. – Nov. 2009. Project financed by NARSS.
15. Modeling yield prediction for the main cereal crops in Egypt using multi-source remote sensing data from 2008 until 2010. Project financed by NARSS.
16. Study the desertification sensitivity using remote sensing, GIS and MEDLUS Method in Egypt from 2009 until 2012. . Project financed by NARSS.





17. Establishment of an integrated system engineering support of development projects on the road of Sohag - Safaga - Eastern Desert, Egypt. From 2010 until 2014. Project financed by NARSS.
18. Building spectral library for common crops and soil types in Egypt from 2010 until 2011. Project financed by NARSS.
19. Sinai Information System for Land management and Environment Monitoring from 2011 -2013. Project financed by NARSS.
20. Land Resources Assessment of El-Galaba Plain, South Egypt for the Potentiality of Agriculture Expansion Using Remote Sensing and GIS Technologies. Project financed by NARSS. (2013-2014).
21. Development of an Automated Decision Support System for Precision Agriculture Project. (Project financed by NARSS 2019-2021).

Conferences and workshop coordinator:

1. 10th International Conference of Egyptian Soil Science Society (ESSS) and 4th International Conference "On-Farm Irrigation and Agro climatology" 5-8 November 2012, Ameria, Alexandria, Egypt.
2. The 2th Technical and Steering Committee "Improving Local Governance processes through Exchange of Good Practices Pilots and Training in Geospatial Technologies (LOCAL-SATS)", Alexandria, Egypt, 22th -23th October 2014.
3. 1st International conference on advances in Soil Sciences, Alexandria, Egypt, 2-5 May 2016.
4. 2nd European Plant Science Conference, Milan, Italy October 18-19, 2019.
5. One Day workshop under tite : New technology for susinable agriculture development , 17/2/2020 , Cairo, Egypt.
6. Egyptian satellite location for The first international African Conference of Precision Agriculture (AfCPA), 8-10/12/2020, Cairo, Egypt.





Join Conferences

- 6th AARSE International Conference on Earth Observation & Geoinformation Sciences In Support of Africa Development held in Cairo – Egypt from 30th October – 2th November 2006.
- 8th International Conference on Precision Agriculture. July 23-26, (Minneapolis, USA), 2006.
- 4th Scientific Conference of the Agricultural & Biological Research Division under the theme “Safe Agriculture Products for Health & Environment by Using Recent Technology ”from 5-6/5/2008. National Researcher Center (NRC), Cairo, Egypt.
- Soil World Day of the land 15 to 16 December 2014, Zagazig University - Egypt
- The 11th International Conference of the Egyptian Society of Soil Science on 5-7MAY 2014, Kafr El-Shiekh, Egypt.
- The 1th International Conference of Soil and Water Dept., Faculty of Agriculture, Kafer El-Shiekh University on 5-7MAY 2014, Kafr El-Shiekh, Egypt.
- The 1th International Conference on Research and Innovation for Sustainable Soil Management, ICRISSM 2014, Hurghada, 27th - 29th November 2014.
- The 20th World Congress of Soil Sciences, Jeju, South Korea, from June 8 to 13, 2014.
- The international conference “Agricultural and Environment for Sustainable Development” May 25-27, 2015, National Research center, Cairo, Egypt.
- The 36th International Symposium on Remote Sensing of Environment, 11-15 May 2015, Berlin, Germany.
- Geospatial technology Conference 20th May, 2015, Cairo Egypt.
- Geospatial technology Conference 17th May, 2016, Cairo Egypt.





- The 12th International Conference of the Egyptian Society of Soil Science 7-9 March 2016, Suez Canal Univ. Ismailia, Egypt.
- 3rd China International Agricultural Remote Sensing Application Technology Summit (ARS2017), Sept. 27-28, 2017, Langfang City, Hebei Province, China.
- The NASA Land Information System (LIS): Workshop for Egyptian Applications, 6-10, August, 2017, Cairo, Egypt.
- 4th Arab Water Forum “Sharing Water ... Sharing Destiny” held during the period 26-28 November, 2017, in Cairo, Egypt.
- The Global Symposium on Soil Pollution (GSOP18), FAO headquarters in Rome, Italy on 2 to 4 May 2018.
- United Nations/Belarus Workshop on Space Technology Applications for Socio-Economic Benefits, on 11 - 15 NOVEMBER 2013, MINSK, BELARUS.
- 14th International Conference in Precision Agriculture June 24-27, 2018 . Le Centre Sheraton • Montreal, Quebec, Canada.
- The 13th International conference of ESSS, “Management of Water and soil Resources under Climate Changes” Cairo, Egypt, 4 - 5 December 2018.
- Geospatial Technologies Conference, Geomakani, Cairo, Egypt, 7th - 8th May 2018.
- 8th Asian-Australasian Conference on Precision Agriculture, from 14-17, October 2019 at Punjab Agricultural University (PAU), Ludhiana, India.
- EcoSSSoil International Symposium In Commemoration of World Soil Day 2019 under titled: Linkage of the Soil-Cyber Systems to Soil Health & Ecosystem Services, December 3~6, 2019 The K-Hotel Convention, Seoul, Korea.
- Global forum for higher education and scientific research (gfhs) April 4 - 6/2019, Al Masa New Capital – Cairo, Egypt.





A memorandum of understanding (MoU):

International MOU:

1. Participated in Signing MOU between Legal represented of National Authority for Remote Sensing and Space Sciences, Cairo, Egypt and International Institute for Arid Land (ICARDA), Lebanon.
2. Participated in Signing MOU between Legal represented of National Authority for Remote Sensing and Space Sciences, Cairo, Egypt and V.V. Dokuchaev Soil Science Institute, Moscow, Russia.

National MOU:

1. Participated in Signing MOU between Legal represented of National Authority for Remote Sensing and Space Sciences, Cairo, Egypt and National Research Center, Cairo, Egypt.
2. Participated in Signing MOU between Legal represented of National Authority for Remote Sensing and Space Sciences, Cairo, Egypt and Electronic Research Institute, Cairo, Egypt.
3. Participated in Signing MOU between Legal represented of National Authority for Remote Sensing and Space Sciences, Cairo, Egypt and Consulting Institute, Cairo, Egypt.

Supervisor of PHD and MSC:

Awarded Thesis:

1. Ph.D. under titled: Developing soil and land capability maps of Baharyia Oasis using remote sensing and GIS techniques. Fac. Agri. Mansoura University, Egypt, (2013).
2. Ph.D. under titled: Effect of irrigation improvement in Nile Delta on crop pattern distribution and crops water requirements using remote sensing and GIS. Fac., Agri., Mansoura University, Egypt, (2014).
3. MSc under titled: Evaluation of some soils in Northern Western Coast of Egypt Using Information Technology. Fac., Of Agric., Ain Shams University, Egypt, (2014).
4. MSc under titled: Monitoring quantity and quality for land degradation in salt effect soil in North Nile Delta using remote sensing





- and gis. Fac., Agri., Kafer El-Sheikh University, Egypt, (2016).
5. MSc under titled: Detecting water logging in Ismailia Governorate, Egypt using remote sensing techniques. Fac. of Agric., Suez Canal University, Egypt, (2016).
 6. MSc under titled: Detection of heavy metals contaminations in Southern Port-Saide Governorate using remote sensing. Fac., of Agric., Suez Canal University, Egypt, (2017).
 7. MSc under titled: Effect of climate change on agriculture sector in Nile Delta, Egypt using remote sensing and GIS. Fac., of Agric., Alazher University, Cairo, Egypt (2018).
 8. MSc under titled: Using Remote Sensing and GIS for Sustainable Land Management in Kafr El-Shiekh Governorate, Egypt. National Planning Institute, Cairo, Egypt, (2018).
 9. Ph.D. under titled: Study Groundwater between Idfu and Aswan-Egypt using geographic information system and remote sensing. Faculty of Art, Ain Sham University, Cairo, Egypt, 2018 (2018).
 10. Ph.D. under titled: Sustainable agriculture development based on agro-ecological zones in Halayeb and Shalateen area, Egypt. Fac. of Agric., Suez Canal University, Egypt

In-progress thesis:

1. Ph.D. under titled: Precision irrigation based on remote sensing and GIS in salt-affected soils North Nile Delta, Egypt. Fac., Agri., Kafer El-Sheikh University, Egypt.
2. Ph.D. under titled: Environmental risk assessment in North Sinai utilizing RS and GIS. Fac., of Agri., Elarish University, North Sinai, Egypt.
3. Ph.D. under titled: Monitoring land degradation in some areas in Monfiya Governorate, Egypt Using remote sensing and GIS techniques. Fac., Agri., Monfiya University, Egypt.
4. Ph.D. under titled: Environmental Risk Assessment for Soil Contamination using Remote Sensing in North Nile Delta, Egypt. Arid Land Institution, Ain Shams University, Egypt.
5. Ph.D. under titled: Study the impact of Nirogen gasses emission on climate change using remote sensing, Fac. Of Agric., Alzher University, Cairo, Egypt.
6. MSc under titled: Soil quality assessment based on remote sensing and





- GIS Techniques in Shalateen area, Egypt. Fac., Of Agric., Fayoum University, Egypt.
7. MSc under titled: Study of soil and plant contaminations in Middle Delta using hyperspectral remote sensing. Faculty of Agriculture, Benha University, Mushtuhur, Egypt, (still running).
 8. MSc under titled: Land use planning in Middle Delta using geographic information systems. Faculty of Agriculture, Benha University, Mushtuhur, Egypt.
 9. Msc under titled: Precision agriculture for potato production using multi sensor. Arid Institute, Ain Shams University, Cairo, Egypt.
 10. MSC under Titled: Assessment of land degradation using remote sensing. Faculty of Agriculture, Tanta University.

Teaching the following courses for postgraduate students in Egyptian universities:

1. Use of computers abased for land management Faculty of Agriculture, Tanta University, 2013-2014. 2.
2. Remote sensing course No. 205, Faculty of Agriculture, Al-Azhar University, for the academic year 2015-2016
3. Geographic Information Systems, Faculty of Agriculture, Al-Azhar University, for the academic year 2015-2016.
4. The special studies on the soil survey using remote sensing techniques and GIS, Faculty of Agriculture - Suez Canal University, for the academic year 2015-2016.
5. Field studies using remote sensing and geographic information systems, Faculty of Agriculture - Suez Canal University, for the academic year 2015-2016.
6. Land inventory, classification and evaluation, Faculty of Agriculture, Arish University, for the academic year 2016-2017.
7. Remote sensing, Faculty of Agriculture, Arish University, for the academic year 2016-2017.
8. The special studies course under the title Applications of Remote Sensing in soil monitoring and evaluation, Faculty of Agriculture - Menoufia University, for the academic year 2017-2018.





9. GIS, Faculty of Agriculture, Arish University, for the academic year 2017-2018.
10. Remote Sensing and Geographic Information Systems , Faculty of Agriculture - Al-Azhar University for the academic year 2019/2020.

Judgment and discussion scientific work

1. Around 15 National and international of scientific thesis in Egyptian University (14) and South Africa University (1) .
2. Pre-doctoral qualifying in Egyptian University (4).
3. Promotion of professor and associate professor (1).
4. Judgment for patents (Intel-Misr El Kheir Science and Engineering Fair)

Training courses

- 1- Attended a training course at the Food and Agriculture Organization (FAO), Nairobi, Kenya, entitled: producing land use and land cover maps for the East Africa through African Land Cover Project from August 1998 to September 1999.
- 2- Training course entitled "Monitoring and evaluation of land degradation at the national and site levels" at the Arab Center for Studies of Arid Zones and Arid Lands (ACSAD) Damascus-Syrian Arab Republic from 26/11 to 6/12/2006.
- 3- Training course GPS SOFTWARE (Trimble TerraSync Professional Edition Software Ver. 4.13) held by Trimble company, Cairo, Egypt from 26 to 28 June 2011.
- 4- Training course entitled Developing a personality of Leaderships at DAAD, Cairo, Egypt , Oct.,17/2011.
- 5- Training course entitled "Proposal Writing for Post Docs" at DAAD) Cairo, Egypt, Oct.,16/2011 .
- 6- Training course on radar remote sensing from 27 November to 1 December 2016 held at NARSS, Cairo, Egypt .





- 7- Training course on the ASD (fieldspec spectroradiometer) from April, 19-20, 2016, at NRASS, Cairo, Egypt.
- 8- The international training course on operating and maintaining the ICPMS device at the UAE Scientific Center, May 2019.
- 9- International Training Course on On Line Decision support for fertilizer use Optimization, June 24-27, Montreal, Canada.

